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Guido Mayer

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ROTHWELL, FIGG, ERNST & MANBECK, P.C.

1425 K STREET, N.W.

SUITE 800

WASHINGTON, DC 20005

EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

NOTIFICATION DATE

DELIVERY MODE

03/20/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

It is noted that applicants have filed an Amendment after the Final Rejection; applicants' attorney has addressed the issues of record. The proposed amendment filed on 2/27/08 will be entered; however, it is not in a condition for allowance.

**The Status of Claims:**

Claims 6, and 8-31 are pending.

Claims 6 and 8-31 have been rejected..

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**The rejection of Claims 6, and 8-31 under 35 U.S.C. 102(b) as being anticipated clearly by Oberdorf et al (US 6,114,342) in view of Jemphy et al ( J. Org. Chem . 1981, 46. 4545-4551) and Moody et al (Synlett 1999, no. 10, 1575-76).**

The rejection of Claims 6, and 8-31 under 35 U.S.C. 102(b) as being anticipated clearly by Oberdorf et al (US 6,114,342) in view of Jemphy et al ( J. Org. Chem . 1981, 46. 4545-4551) and Moody et al (Synlett 1999, no. 10, 1575-76) has been maintained with the reasons of record on 7/10/07.

**Applicants' Arguments**

Applicants argue in the followings:

1. the Jempty prior art discloses that the silica supported iron chloride is used in a 1.1 molar ration ,whereas the claimed catalyst uses an amount of from 0.001 to 0.5 mol equivalents; this alone would teaches away from using less than stoichiometric amounts;
2. the Jempty prior art show a combined reagent consisting of  $\text{FeCl}_3$  and  $\text{SiO}_2$  ; this clearly teaches away from using  $\text{FeCl}_3$  as a reagent on its own; the reagent has to have high surface area silicates as an integral part- charcoal , alumina, or molecular sieves would not work as proved by table V;
3. Other benzylic C-O bonds-which are not in a para-position to a nitro group—are not cleaved according to Moody unlike the formula II of the claimed invention); therefore, the disclosure of Moody does not cure the deficiencies of the other prior art.

Applicants' arguments have been noted, but the arguments are not persuasive.

First, regarding the first argument , the Examiner has noted applicants' arguments. However, the difference about the usage of the amount of the catalyst does not carry much of the patentable weight over the prior art since the limitation of

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a process with respect to ranges of pH, time, temperature, speed, and amount does not impart patentability to a process when such values are those which would be determined by one of ordinary skill in the art in achieving optimum operation of the process. The catalytic amount in the process is well understood by those of ordinary skill in the art to be a result-effective variable, especially when attempting to control selectivity and the operational cost of the process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to adjust the amount of the catalyst to its minimum in the Jemty prior art by routine experimentation in order to optimize the reaction process. Therefore, applicants' argument is not persuasive.

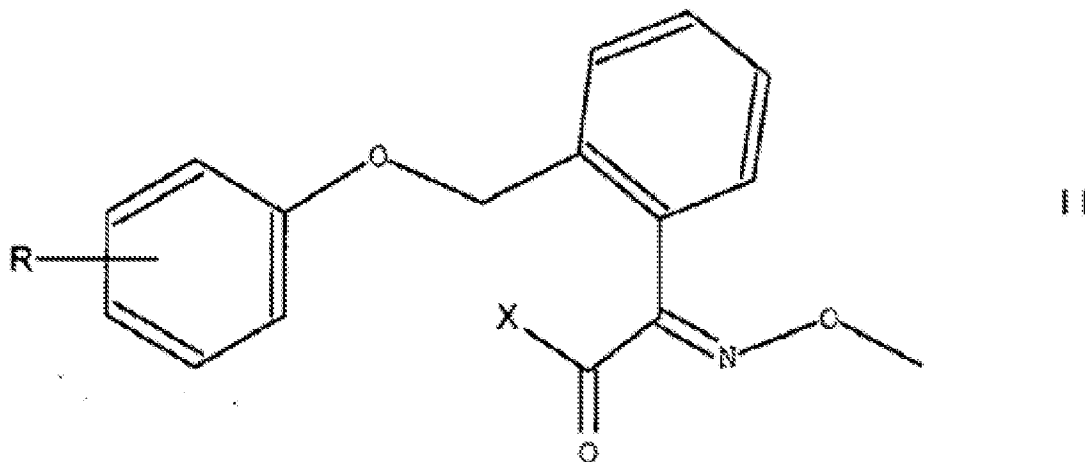
Second, regarding the second argument, the Examiner has noted applicants' arguments. However, the main issue is whether or not the prior art discloses the iron useful for the cleavage of the benzyl ethers; the prior art does teach that particular fact as shown in table 1. Furthermore, the abstract of the prior art expressly discloses the followings:

**In one example the reaction is catalytic in  $\text{FeCl}_3$ , being driven by oxygen.**

**Benzyloxy aromatics are cleaved to phenols. In this reaction  $\text{FeCl}_3$  acts on a Lewis acid.**

The most important element in the catalyst composition is the  $\text{FeCl}_3$  while the rest of the composition is to support the  $\text{FeCl}_3$ . Therefore, on the contrary to applicants' arguments, there is not much difference between the role of the single  $\text{FeCl}_3$  and that of its composition in carrying out the cleavage of the benzyl ethers. Therefore, the prior art is still applicable to the current invention.

Third, regarding the third argument, the Examiner has noted applicants' arguments. However, the formula (II) of the claimed compound is described below:



Wherein the variable R which is nitro can be found in any place; this does include the para-position of the nitro group with respect to the benzylic C-O bonds. This situation can be referred as the similar description of the deprotection of nitro benzylic ethers using the indium catalyst as shown in the Moody. Therefore, unlike applicants' arguments, the prior art is still relevant to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Taylor Victor Oh/

Primary Examiner, Art Unit 1625

3/11/08